SWAZILAND

ANNUAL MEDICAL AND SANITARY REPORT

1969

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INTRODUCTION

Swaziland has an rea of 6,704 square miles and is bordered on the north, west and south by the Transvaal, and on the east by Mocambique and Zululand.

The Territory is geographically divided into four well defined regions, running from north to south, namely the mountainous highveld in the west with an altitude of 3,500 to 5,000 feet, the middleveld with an average altitude of 2,000 feet; and the lowveld or bushveld with an altitude of 1,000 to 300 feet; and the Lubombo Plateau on the east, with an altitude of 2,000 feet. Scenically the Territory is one of the more attractive parts of Africa. The highveld has a temperate climate and frosts occur during the winter. The climate of the middleveld is subtropical, although every few years a frost does occur.

Rainfall, which occurs chiefly in the summer, varies between approximately 30" and 50" a year. Drizzle and mists are frequent in the highveld areas. The country is well watered by numerous perennial streams and rivers, some of which are of a considerable size and now provide water for three large irrigation schemes, which have been established at Mhlume in the north-east, at Big Bend in the east (at both of which sugar is grown) and at Malkerns in the centre of Swaziland (which produces rice, sub-tropical fruit and citrus).

In addition to the irrigation schemes, other important agricultural activities are cattle ranching and seed cotton production in the bushveld and sub-tropical fruit, maize and rice production in the middleveld, in the southern portion of which a considerable amount of tobacco is also grown. In the mining field, Havelock Mine in the north-west is a most important producer of asbestos, and with the opening of the railway in November, 1964 connecting Swaziland with Lourenco Marques, the mining of iron ore at Ngwenya and of coal at Mpaka got underway. A pulp mill and a sawmill are opertaing at two of the forestry concerns in the highveld. Cotton ginnery, meat canning factory and a brewery now operate at Matsapa Industrial Area.

A census of the total population was held in May, 1966. This was the first census of all the people in Swaziland.

The figures are as follows:-

African	362,367
Europeans	7,987
Other Non Africans	4,217
	374,571

One half of the area of the Territory is in communal ownership of the Swazi Nation and the remainder owned by individual tenure farmers. The Swazi have the exclusive use of the communal tenure areas and the remainder is open to farmers of all races without discrimination. Swazi dwellings for the most part consist of wattle-and-daub structures, or bee-hive huts, and small family collections of these huts are widely dispersed. Other than in the neighbourhood of the larger towns, there are no villages. Whilst the agricultural activities of the Swazi are still, in the main, concentrated on the raising of cattle and goats and the cultivation of maize, the work of the Agricultural Department is now producing results, and both the standard and scope of Swazi farming are improving year by year.

The/.........

The following hospitals exist:-

A. Run by Government:

Mbabane	312 beds
Hlatikulu	168 beds
Pigg's Peak	50 beds
Mankaiana	41 beds
Matsapa (Tuberculosis)	200 beds
Goedgegun	15 beds
Mental	200
Total:	986

B. Run by Missions:

Raleigh Fitkin Memorial, Manzini	322 beds
Good Shepherd, Stegi	64 beds

C. Run by Industry:

Havelock Mine Hospital	70 beds

D. Run Privately:

St. Michael's Clinic	23 beds
TOTAL:	1,361

Apart from these formal hospitals there are dispensaries or clinics run by industrial concerns which can accommodate up to about 20 patients each.

The rural areas are catered for by 46 clinics staffed by trained nurses, 25 of them being conducted by Missions and 21 by Government.

A Mobile Eye Clinic, donated by the Royal Commonwealth Society for the Blind and inspected by H.R.H. Princess Alexandria during her visit to Swaziland on the occasion of the Independence Anniversary Celebrations, was launched in October.

The Mobile Clinic will visit all rural clinics, health centres and schools throughout the country. It has commenced functioning in the Shiselweni District. The purpose of the Mobile Eye Clinic is to do a survey on blindness and eye diseases in Swaziland; to treat minor eye ailments; to refer patients to the hospitals for major treatment and to advise on the care and protection of eyes. The Staff Nurse-in-Charge, Miss Rejoice Msibi, has received training at St. Johns Hospital at Baragwanath and in Kenya and Malawi where she was sponsored by the Royal Commonwealth Society for the Blind who will also pay her salary for the next 2 to 3 years during the survey.

There were 53 doctors and 3 dental surgeons in the Country in 1969. Of the 53 doctors, 20 were in Government Service, 8 in Mission hospitals, 11 in Industry and 13 in private practice. Of the 20 doctors in Government Service, 1 was an International Voluntary Services Volunteer, 1 OXFAM doctor and 1 Peace Corps doctor who donated a large part of his time to the Paediatric Wards and Outpatient department at Mbabane. In addition, the Federal Republic of Germany sponsored a Radiologist to assist with the operation of its X-Ray Unit donated by the West German Government to Swaziland as an Independence Gift.

The Mbuluzi Leper Hospital, situated 10 miles from Mbabane and run by the Nazarene Mission, with the assistance of a Government grant, copes most adequately with the small number of lepers in the Country.

The British Red Cross Society is now running Infant Welfare Clinics at Mbabane, Hlatikulu, Stegi, Pigg's Peak, Manzini, Kwaluseni, Mhlambanyati and Goedgegun at which most useful work is being done. The Save the Children Fund has started a school feeding scheme.

In addition, the Swaziland Red Cross, with OXFAM and Ministry of Health assistance, are conducting a nation wide measles and polio vaccination campaign. The Mbabane, Manzini, Pigg's Peak Urban areas and Havelock Mine Industrial area have been completed. All Urban, Industrial and Rural areas are to be covered.

The Public Health Services of the Country are centred at the Health Office in Manzini for the control of Malaria and Bilharzia and at Mbabane which controls environmental health, Health Education and a Public Health Nursing Unit. There is a Pathology Laboratory at which routine serological, biochemical bacteriological and haematological investigations are carried out.

The Medical Association of Swaziland whose members include private practitioners, medical missionaries and Government medical officers, hold quarterly meetings, which are well supported and which make up to some extent for the lack of professional contact so common in territories such as Swaziland.

The training of nurses in Swaziland is carried out at the Ainsworth Dickson Training College attached to the Raleigh Fitkin Memorial Hospital, Manzini, where training for the Nurses Examination Board of Botswana, Lesotho and Swaziland qualifications in General Nursing, lasting four years, and in Midwifery, lasting one year, is given. The Ainsworth Dickson Training College can at present train sufficient nurses for the needs of Swaziland. Dispensers are trained at Government Hospitals as required. Laboratory Assistants are trained at the T.B. Centre Public Health Laboratory by a W.H.O. Technician. This laboratory does Public Health work as well as the T.B. laboratory investigation for the whole Country.

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CHAPTER 1

REVIEW OF THE YEAR'S WORK

The Ministry of Health has undergone considerable expansion since Independence on a number of fronts and has become one of the biggest Ministries in the Swaziland Government.

2. STAFF:

The establishment has increased from 512 in 1967 to 549 in 1968 and presently employs 632 in 1969. The increase in personnel is reflected in the following table as being due mainly to the increase in the numbers of nurses employed:-

1967	-	163 Nurses
1968	-	184 "
1969	-	214 "

Of the 214 nurses 100 are enrolled and 114 registered. All nurses are doubly qualified in General Nursing and Midwifery.

As a result of the expansion of the Nursing Services the surplus of nurses in Swaziland has been greatly reduced and there are little, if any, Swazi National doubly qualified nurses without employment.

In pursuance of Government policy of localization the Ministry of Health has localized 96% of its staff and of the 27 expatriates employed 23 are professionals of whom 12 are doctors. The Nursing Services are 100% localized.

During the year Doctors Copeland, Kennedy, van der Veer, Parker and James left the Service. The OXFAM doctor, Dr. Peter Moss', tour of duty came to an end in November but he requested to stay on in a temporary capacity for a further six months. Two doctors were recruited, Dr. Mokhobo, physician specialist, and Dr. Rwairwai.

The shortage of doctors remained critical despite intense recruitment campaigns in South Africa and in the U.K. and by the end of the year there were eight vacancies..

The first Swazi dentist, Dr. Percy Pym Dlamini, returned to Swaziland after qualifying in Edinburgh and practising in London and commenced work at the Mbabane Hospital.

Dr. Pease was appointed Acting Senior Medical Officer on 1.4.69. on the transfer of Dr. Behan from Hlatikulu Hospital to Manzini as Medical Officer of Health.

Mesdames S. Kunene, J. Mamba, G.T. Nkosi and S.E. Tshabalala were promoted to Nursing Sisters in January, 1968. Sister Norma Dludlu was promoted to Public Health Nursing Supervisor N.3 during the year and Mr. C.D. Nxumalo to Senior Health Inspector.

Laboratory Technicians. In addition, two laboratory assistants, Messrs. C. Zulu and M. Ndlela were promoted to Laboratory Technologists on the H4-2 scale.

Messrs. Zwane & Mbhamali, Assistant Accountants, were promoted to Assistant Accountants/Accountants G5-3.

Mr. Gillett, Principal, was transferred to Ministry of Finance and Mr. Dube was appointed Acting Principal.

/Mr. J. Nyembe....

Mr. J. Nyembe completed his in-Service training in the Ministry of Health and was appointed to the substantive post of Executive Officer Grade II.

The Ministry of Health continued to rely on foreign agency personnel to fulfil a number of functions:

1. Dr. Clapp – Peace Corps doctor
2. Dr. James – I. V. S. doctor
3. Dr. Moss – O.X.F.A.M. doctor
4. Dr. Wieland – Federal Republic of Germany doctor
5. Miss Hooper – I.V.S. Laboratory Technician
6. Miss Evans – I.V.S. Physiotherapist
7. Mr. H. Cotton – W.H.O. Laboratory Technician
8. Mr. Ken Jenkin – S.C.A.A.P. Hospital Administrator Trainee.

The Specialists visit Mbabane Hospital mainly, at regular intervals on a Pro Deo basis. They perform major operations, advise incumbent staff and help to raise the standards of medical care generally. Teaching programmes for Nurses have also been introduced. The Specialist panel consists of a Radiologist, Pathologist, Gynaecologist, Urologist, Thoracic Surgeon, E.N.T. Surgeon, Orhopaedic Surgeon, Paediatrician, Plastic Surgeon, Anaesthetist, General Surgeon, Dermatologist and Psychiatrist.

A number of medical students from Stellenbosch University visited Swaziland and worked in the bigger hospitals during their vacations, also on a voluntary basis. Their presence relieved the hard pressed medical staff of some of their burdens and the students were welcome.

A S.C.A.A.P. Officer was sent to Swaziland to train local personnel in hospital administration and to introduce a uniform system of administration within the hospitals and institutions of the Ministry of Health.

3. BUILDINGS:

(i) Hospitals. The second storey at Mbabane Hospital was completed, thereby increased the bed capacity from 175 beds to 312. In addition, the new kitchen, junior and senior staff dining rooms and housekeeper offices and stores were also opened. A new dispensary including offices and store rooms was completed and the laboratory, administration offices and doctors consulting rooms were virtually completed. The new X-Ray building, an independence gift from the Mine Labour Organization, was opened by the Minister of Health on the 3rd December. The building was donated to house the new X-Ray Unit, also an independence gift, given by the West German Government, who have sent a doctor as well for a period of one year to supervise the work of the X-Ray department.

Phase I, the building of a kitchen and laundry at Pigg's Peak hospital has been completed and Phase II, the building of a new theatre and X-Ray suite is scheduled for the following year in the phased planning for the expansion of the hospital.

Ablutions for the maternity and children's ward at Mankaiana hospital have been completed as have the extensions to the nurses home. A new mortuary has also been built.

At Hlatikulu Hospital the alterations and extensions to the kitchen and isolation wards were finished during the year and a new and enlarged laboratory was also completed.

The alterations at the Mental Hospital were made to accommodate the female mental patients, who were previously housed at Mbabane Gaol. The total number of beds at the Mental Hospital is 200.

(ii) Health Centres. A new health centre was built in the precincts of the Mbabane Hospital Complex. The building was a gift from the people of the Island of Jersey.

(iii) Physiotherapy Department. A new physiotherapy department was opened by the Hon. Minister for Health, Dr. Allen Nxumalo on 2nd December, 1969. The building was erected from voluntary subscriptions to the Council of Social Services and equipped from part of a donation of surgical equipment for Mbabane Hospital given by the Chairmans Fund of the Anglo-American Corporation for the Panel of visiting Specialists.

(iv) Rural Clinics. Three new clinics were erected at Sinceni, Mathanjeni and Ntshaneni from funds donated by O.X.F.A.M. The static clinics were built to take the place of the Save the Children's Fund Mobile Clinic which operated in the Shisekweni District. Three Swazi National Council Clinics at Lubuli, Nomahasha and Herefords were taken over by the Ministry of Health.

4. OTHER DEVELOPMENT PROJECTS:

(i) A Mobile Eye Clinic donated by the Royal Commonwealth Society for the Blind commenced operating in the Shiselweni District in October. The Clinic is scheduled to undertake a survey of blindness and eye diseases throughout the Country. Health education and treatment of minor eye ailments is also undertaken.

/(ii)..........

(ii) A measles campaign conducted by the Swaziland Red Cross Society was started during the year. Children in Pigg's Peak, Mbabane, Manzini and Emlembe have already been vaccinated. The vaccine has been donated by OXFAM and the Ministry of Health has provided the staff for the vaccination team.

(iii) The visiting panel of specialists from South Africa has expanded since its inception and twice monthly visits to Mbabane and Kahlatsi hospitals are undertaken. A large supply of surgical equipment was also donated by the Chairmans Fund of the Anglo-American Corporation and which greatly enhanced the services rendered by the specialists.

(iv) The T.B. Control project became the National T.B. Control Centre. The W.H.O. expert left the Country and the Scheme is run entirely by local personnel.

(v) The Pathological Laboratory which was part of the T.B. project has become a separate entity and is called the Central Public Health Laboratory. A wide range of laboratory investigations, including cervical cytology and blood alcohol analysis is undertaken. The Laboratory manufactures its own sera, biochemical reagents and media.

5. DONATIONS:

Reference has been made to the number of donations given to the Ministry of Health since Independence. They are itemized below:-

	DONOR	ITEM	VALUE IN RANDS
1.	Federal Republic of Germany	X-Ray Unit	20,000
2.	Mine Labour Organization	X-Ray Building	12,500
3.	Island of Jersey	Mbabane Health Centre	16,000
4.	OXFAM	3 Rural Clinics 1 Vehicle	9,000 1,000
5.	Standard Bank	Orthopaedic Operating Table	750
6.	Anglo-American Corporation	Equipment for Panel of Specialists	10,000
7.	W.H.O.	Equipment for Malaria Control	3,750
8.	Council of Social Services	Physiotherapy Unit	1,800
9.	U.N.I.C.E.F.	Equipment for Basic Health Services	30,100
10.	Royal Commonwealth Society for the Blind	Mobile Eye Clinio Maintenance and Equipment	3,000 4,000
11.	U.N.D.P.	Laboratory Equipment & Fellowships	4,760
12.	U.K. Government	Renovations to Hospitals and Clinics.	77,500
		TOTAL :	R 194,160

/Technical Assistance - Personnel....

Technical Assistance - Personnel

1.	Federal Republic of Germany	Radiologist for one year at Mbabane Hospital
2.	Anglo American Corporation	Panel of Specialists from South Africa twice monthly
3.	OXFAM	1 Medical Officer to visit rural Clinics
4.	I.V.S.	1 Medical Officer at Kahlatsi Hospital
5.	Peace Corps	1 Part Time Paediatrician at Mbabane Hospital
6.	U.N.D.P.	1 Laboratory Technologist at Central Public Health Laboratory
7.	O.D.M.	S.C.A.A.P. Administrator

POST GRADUATE COURSE & SEMINARS:

Dr. Friedman -	Management and Administration for Senior Government Officials	Uganda
Dr. Klopper -	Comprehensive Health Planning and Public Health Administration	U.S.A.
Mr. P. Matthews -	Entomological Techniques	Nigeria
Mr. Gininda -	Course for Polyvalent Microscopists	Nigeria
Mr. Hlope -	" " " "	Nigeria
Sister Bhengu -	International Council of Nurses	Canada
S/N Mlambo -	Public Health Nursing	India
S/N Nsibande -	" " "	India
Sister Khanyile -	Radiography	U.K.
S/N Rejoice Msibi -	Ophthalmic Nursing	Kenya & Malawi
Mr. Robert Vilakazi -	Course for Polyvalent Microscopists	Nigeria
Mr. John Dlamini -	" " "	Nigeria
Sister Dludlu -	Conference Nutrition & Child Feeding	Kenya
S/N Ruth Maseko -	Physiotherapy	Republic of South Africa
Miss R. Mabila -	Physiotherapy	U.S.A.
Sister A. Dlamini -	Course on Family Planning	Korea
Sister J. Khumalo -	Seminar on Protein Calorie Malnutrition	Kenya
S/N E. Ntiwane -	" " "	Kenya
Matron Mtetwa -	Maternal & Child Health	Brazzaville, Congo.
Mrs. Pakathi -	Refresher Course for Public Health Nurses	Nigeria
Mrs. Dladla -	" " " "	Nigeria
Dr. Pym Dlamini -	W.H.O. Conference Dental Services	Lagos, Nigeria

OFFICIAL VISITORS - 1969

Mr. Harris - Field Director, OXFAM.

Mr. Charles J. Woodsworth - Canadian High Commissioner to Swaziland.

Dr. Richard J.H. Achenbach - First Secretary, German Embassy.

Dr. W.J. Maelor Evans - Deputy Medical Adviser, Ministry of Overseas Development.

His Excellency Dr. Joao Morais da Cunha Matos - Portuguese Ambassador to Swaziland.

His Excellency Mr. Yun Young Lim - Korean Ambassador to Swaziland.

His Excellency Mr.M. Dagan - Israeli Ambassador to Swaziland.

His Excellency Baron Evert Joost Lewe Van Aduard - Netherlands Ambassador to Swaziland.

Mr. Richard J. Dols - Second Secretary and Consul, Embassy of U.S.A.

Mr. Robert W. Chase - Charge d'Affaires ad Interim to Embassy of U.S.A.

Mr. J.A. Weston - Department of Trade & Commerce, Canada.

Dr. M. Blaha - Chief Medical Officer, Germany.

His Excellency Signor Alberto C.Paveri-Fontana Di Fontana Pradosa - Ambassador of Italian Republic.

Chief J.O. Udoji - The Ford Foundation, Kenya.

Mr. J.W. Mackley - Manpower Adviser, Department of Employment & Productivity, U.K.

His Excellency Dr. Roy Hermann Hunziker - Switzerland Ambassador

Mr. D.S. Anderson - Deputy Representative, Ford Foundation, Kenya.

Dr. Ira Berlove

Governor Max Diner

Mr. J.A. Forsythe - Australian Councillor.

Mr. Howse - Oxfam Field Director.

Mr. Duncan Kirkpatrick - Oxfam Field Director.

Dr. Lea Zwanger - Director of Nursing Education, University of Israel.

Professor J. Louw President S.A.College of Surgeons & Physicians

Dr. Viljoen - Medical Association of South Africa.

Dr. Saunders - College of Physicians, Surgeons and Gynaecologists of South Africa.

Dr. Swanepoel - S.A. State Health Department.

Mr. M.D. Palzur - Counsellor in Israeli Embassy to Swaziland.

Mr. J.R. Worslow - Director, Armour Pharmauci, U.K.

Mr. van Rensburg - Director, Armour Pharmauci, S.A.

Mr. Don Taylor - Editorial Director, New Commonwealth Magazine, London

/Mr. Kudlith ....

OFFICIAL VISITORS - 1969 (CONTD.)

Mr. Kudlith	-	First Secretary, Embassy of the Federal Republic of Germany.
Mr. A.R. Thomas	-	Ministry of Overseas Development, London.
Mr. R.S. Porter	-	Ministry of Overseas Development, London.
Dr. Yepez	-	W.H.O., Kenya.
Mr. Dobes	-	U.N.I.C.E.F., Lusaka.
Dr. C. MacDougall	-	Leprologist, Medical Adviser, O.D.M. London.

CHAPTER II

TUBERCULOSIS

The year 1969 saw the departure of the World Health Organization (W.H.O.) Senior (T.B.) Medical Officer - the last of the team of W.H.O. experts who initiated an organised programme of tuberculosis control in Swaziland. The National Tuberculosis Programme came fully under the direction of the Ministry of Health.

As experience in other countries has shown, the most practical programme of control is one which is integrated into the general health services of the country and this practice has been followed here. The majority of peripheral health centres (P.H.C's.) (or clinic) and all hospitals are part of the programme of control. Integration was by no means an easy task and still provides cause for concern as will become evident from this report.

"Case" Finding:

(By a "case" is meant a patient with pulmonary tuberculosis who is excreting tubercle bacilli in his sputum.)

Case Finding is carried out by upwards of 55 P.H.C's and hospitals in the country by means of sputum-collection from patients complaining of chest symptoms.

8,735 sputum specimens were processed. (Central Public Health Laboratory.) Of these 595 sputum specimens were "positive" on direct microscopy, giving a "positivity" rate in this category of 6.8%.

The Laboratory could in fact cope with twice the number of specimens received. Despite regular visits to P.H.C's and Hospitals in order to supervise and motivate tuberculosis control activities there appeared to be a general reluctance to make sputum collection a routine procedure. Too great a degree of selection of patients for sputum collections was used and sputums were collected late in the "chest" illness (for which the patient was attending) rather than early. This was most marked in the Lubombo District where for 6 months of the year the direct microscopy "positivity" rate was 10% of all specimens received.

All sputum specimens received are subject to culture examination. By this means an "extra" 3.8% of specimens (Direct Microscopy "negative" but culture "positive) were found to be "positive". (Total "positives" thus 10.6%). It is felt that a large proportion of these microscopy "negative" but culture "positive" specimens are "oppertunist" (atypical) tubercle bacilli some of which do not cause disease. It is hoped to investigate this problem in 1970.

Culture contamination ranged from 2.3% - 4.2% in specimens collected at the National T.B. Control Centre (to which the Central Public Health Laboratory is attached) and from 9.5% - 12.7% in specimens collected elsewhere in the country and sent for processing to the Central Public Health Laboratory. The higher rate in specimens collected at P.H.C's and Hospitals in the country represents delay between collection and receipt in the Laboratory.

X-Ray Examination:

"First Time" X-Rays.

1 Origin	2 Type	3 Total	4 Abnormal	5 Cavity/s	6 Sputum +ve
Nat.T.B.Cont.Cent.	70 mm.	3015	448(14.9%)	184(6.1%)	126(4.2%)
"Referred"	100 mm. & Large	684	416(60.8%)	107(15.8%)	70(10.2%)

Columns 1 & 2 : At the National T.B. Control Centre 70 mm. films are taken of patients reporting for examination. "Referred" films are either 100 mm. or full size and are referred for reading from Hospitals and Industrial concerns with X-Ray units to the National T.B. Control Centre.

Column 3 : Total Number taken and referred during the year.

Column 4 : The Number found to have pulmonary abnormalities.

Column 5 : The Number (of abnormal X-Rays) found to have one or more cavities.

Column 6 : The Number (of patients whose X-Rays show cavities) found to be sputum positive.

Percentages (in brackets) are of the total number of X-Rays taken.

It is obvious from these figures that slightly more than two thirds of patients whose X-Rays showed the presence of a cavity or cavities had a "positive" sputum.

Extrapulmonary Tuberculoses was reported in the final Quarterly Report of the year. This is the first time that it was so reported. There were 11 patients. 6 had Glandular Tuberculosis. In some the diagnosis was histologically proven.

Treatment:

If an arbitrary period of three months (set after the end of each quarter of the year) was allowed after diagnosis, during which patients should have attended to collect their first drug supplies, then 34% of patients for whom treatment was prescribed did not attend.

Of patients on treatment during the year about 50% defaulted from treatment (mainly patients initially sputum "positive"). About half of these could be traced and returned to treatment.

There is a remarkable lack of urgency in getting defaulting patients back onto treatment. Action taken to trace defaulting patients was long delayed and follow up actions (when there was no response by the patient) was meagre.

Two conclusions may be drawn:

(1) Nurses (who run the P.H.C's and Hospital Out-Patient's Departments are not educating the patients about the disease adequately - if they were, there would not be such an appalling default problem.

(2) An appreciation of the need to reduce the pool of infectious patients (by keeping them on treatment) and thereby prevent spread of infection was lacking.

The following "Follow-Up" Examinations were carried out on Tuberculous and "suspect" patients:-

Sputum examinations: 5,146
X-Ray examinations : 70 mm. - 1,542; 100 m.m. or larger - 190.

Actions taken to trace defaulters amounted to 1,568 during the year. These were made almost entirely to patients initially sputum positive.

Vaccination : "Mass" Programme : (Lubombo District).

"Direct" B.C.G. Vaccination (without preliminary Tuberculin Testing) combined with Small Pox Vaccination was carried out in the country. All children aged 0 - 15 years were eligible to receive B.C.G.

The vaccinating team usually spent 2 days at each school in order to vaccinate school children and all non-scholars who stayed near the schools. The team completed vaccination in Lubombo District during the year.

The coverage of the age group 0 - 4 years was 46.6% which showed no change from 1968, but that of the age group 5 - 14 years showed a drop of more than 20% from the previous year so that the over-all coverage in the age group 0 - 14 years was little over 52%. In part we were to blame for this in not enlisting the co-operation of the traditional authorities of the people in the rural areas. Furthermore, we might have had a better coverage had we had more than the token assistance we received from other Government departments.

The vaccination totals in the Lubombo District were as follows:

LUBOMBO DISTRICT

Age	Eligible Population	B.C.G. Vaccination	Coverage %	Small Pox Vaccination	Coverage %
0 - 14	39,121	20,762	52.9	20,421	51.0
15 +	60,022	969 *	-	12,236	20.4

* only 15 year olds vaccinated with B.C.G. in this age group.

"Maintenance" Programme (Rest of Country - 3 Districts).

The idea of maintenance vaccination was for the nurses-in-charge of P.H.C's (in districts in which the "mass" programme had been completed) to visit the schools nearby their P.H.C's once a year and vaccinate newcomers and those who missed vaccination during the "mass" programme phase. In addition the nurses were to vaccinate newborn and other children at their child welfare sessions. This would also help keep them "in practice" in so far as the technique of vaccination was concerned.

It was planned to initiate this phase of the programme during the year and it did in fact just "get off the ground". The pace since then has, however, been rather sluggish and unproductive. Infinite patience and time will be necessary in successfully directing maintenance vaccination. From experience gained during the year it is obvious that it will work in some P.H.C's but will fail in others. Constant motivation will be necessary as in other facets of the control programme.

Vaccination totals were as follows:-

MANZINI, SHISELWENI & HHOHHO DISTRICTS

Age	B.C.G. Vaccination	Small Pox Vaccination
0 - 14	1,564	1,218
15 +	17	2,937

Further comments:

One problem which recurred time and time again during the year was the unannounced changes of nursing staff at Hospitals and P.H.C's. We cannot allow control activities to cease because a "new" nurse knows nothing about T.B. control procedures. Basically the solution is simple - if Matrons of Hospitals (who supervise

P.H.C. nurses) would notify the National T.B. Control Centre reasonably well in advance of an impending staff change such a nurse could be trained to take over, and the continuity of the service would be maintained. Alternatively, it would be easier not to change P.H.C. staff more than once a year. In addition to being continuous it is as important for a service to be stable.

A related problem was actualclosure of a P.H.C. Although this was "announced" it created severe patient hardship in a heavily populated rural development area. There were upwards of 45 tuberculous patients under treatment at the P.H.C., the majority of whom defaulted from treatment as a result of the closure.

The Home Visiting Teams were rationalised early in the year. In the past the team consisted of 2 Health Assistants and a driver. One Health Assistant was replaced by a Nurse in order to give a more "medical" background to the team. The supervision of T.B. Control procedures at the P.H.C's originally done by the nurses was taken over by the Senior Clerical Officer and the T.B. Medical Officer.

In accordance with the policy of ambulant treatment of tuberculous patients Matsapha T.B. Hospital was phased down, bed occupancy cut by half (to 35) and likewise the nursing and paramedical staff reduced in proportion.

7 Nurses received training in Tuberculosis Control Procedures. Lectures on T.B. Control were given to senior student nurses at the Nurses Training School in Manzini. A meeting was held with the field staff of the Agriculture Department in Lubombo District in order to explain the vaccination programme and enlist their support in it.

"In-service" refreshing of nurses and health assistants attached to the National T.B. Control Centre was carried out in order to clarify priorities in the control programme.

The W.H.O. Senior Medical Officer and the T.B. Medical Officer attended a seminar on tuberculous control in Brazzaville in March.

ANNUAL MALARIA REPORT

1. CLIMATIC CONDITIONS:

This year owing to the absence of the usual early summer rains, we did not have a large build up of A.gambiae during the months preceeding the heavy malaria transmission period, April to June. Good rains did however fall during March and April and the subsequent build up of A.gambiae during March to June was perhaps too late for much transmission.

The meteorological records from various stations are reflected in the following table:-

METEOROLOGICAL REPORT

Month	MANZINI			STEGI			BIG BEND			MHLUME			GOLLEL		
	Altitude 2,000 ft.			Altitude 2,200 ft.			Altitude 500 ft.			Altitude 950 ft.			Altitude 600 ft.		
	Rainfall in mm.	Temp. °C Max.	Min.	Rainfall in mm.	Temp. °C Max.	Min.	Rainfall in mm.	Temp. °C Max.	Min.	Rainfall in mm.	Temp. °C Max.	Min.	Rainfall in mm.	Temp. °C Max.	Min.
July, 1968	16.3	30.5	4.5	30.5	27.0	4.0	10.5	33.2	1.6	20.2	32.7	31.6	6.5	38.5	3.0
August	30.8	33.0	6.2	22.5	30.0	6.5	28.1	34.5	3.8	16.2	35.0	11.1	20.5	36.5	3.5
September	13.0	35.5	6.5	29.0	33.0	[illegible]	4.0	38.0	3.9	13.0	38.3	10.0	2.5	39.5	5.5
October	22.6	40.5	8.5	43.0	33.2	10.0	57.0	39.3	7.6	30.0	41.6	14.4	19.0	44.0	7.0
November	172.3	38.0	9.5	120.5	35.2	8.2	49.7	40.0	10.2	124.7	39.4	15.0	41.0	42.0	7.5
December	72.4	36.5	14.0	144.0	35.2	14.0	27.3	40.0	14.0	48.7	38.3	17.7	10.5	42.5	12.0
January, 1969	137.5	36.0	14.5	196.0	36.0	15.0	132.7	40.6	16.0	62.0	41.1	16.6	42.0	44.5	13.5
February	24.5	36.0	16.5	47.0	35.0	16.0	18.4	40.2	15.6	35.2	40.0	16.6	25.5	41.5	18.5
March	202.5	35.2	13.0	154.0	37.0	14.0	46.7	40.0	14.0	155.7	40.0	15.0	125.5	41.5	17.0
April	118.5	33.6	11.5	81.0	33.0	12.0	72.8	37.0	13.0	105.7	35.5	12.7	66.8	36.0	16.0
May	46.2	29.0	7.0	84.0	28.2	11.2	80.1	31.5	5.5	68.0	31.6	6.6	58.5	35.0	15.1
June	Nil	29.0	5.0	Nil	28.0	9.2	2.5	31.2	0.0	1.0	31.6	1.6	Nil	29.0	10.0

2. MEETINGS:

At the Annual Staff Meeting held at Manzini during the second week in August, lectures on the various aspects of Malaria control were given, individual problems discussed and the staff informed of their duties for the new Malaria season. They were also examined for T.B. and Bilharziasis.

3. W.H.O. ASSISTANCE:

Mr. S. K. Sobti, W.H.O. Entomologist, left Swaziland during March after approximately a year investigating the role of A.gambiae in malaria transmission.

4. POPULATION AND HUT COUNT:

The following are population figures for areas actively worked by the Health Assistants:-

Adults	Children	Infants	Total
38,655	29,203	4,937	72,795

The total estimated population for the whole of the malarious area, i.e. maintenance and consolidation areas, was 204,821.

5. MALARIA CONTROL MEASURES:

(a) RESIDUAL SPRAYING with 75% D.D.T. Wettable Powder was carried out as follows:-

January - April: 7,733 huts sprayed at Border Gate area, Horo area, Vuvulane, Volinde, Tshaneni, Mhlume and Ubombo Ranches.

(b) DRUG PROPHYLAXIS was instituted in a compound at Thambankulu Estates where a single case of Malaria occurred.

(c) SURVEILLANCE OPERATIONS were continued by the field staff who were concerned mainly with routine blood taking and space spraying.

6. PARASITOLOGY:

Blood slides taken during the year were examined at the Health Office, Manzini by four microscopists and the following results were recorded:-

Source	Negative	Positive	Total
Indigenous	26,717	26	26,743
Immigrants	2,626	46	2,672
Cryptic	-	1	-
	29,343	73	29,415

Species	
Plasmodium falciparum:	65
Plasmodium malariae:	4
Plasmodium falcip/mal:	4

Annual Parasite Incidence: 0.36
Annual Blood Examination Rate: 14.4

Immigrants originated from the following sources:-

Source	Negative	Positive	Total	% Positive
Mocambique	856	41	897	4.6
Zululand	1,109	3	1,112	0.27
Transvaal	638	2	640	0.32
Other	23	0	23	0
	2,626	46	2,672	1.7

7. ENTOMOLOGY:

(a) HUT SPACE SPRAYING: The results of this work carried out by field staff were as follows:-

No. of huts tested:	15,455
No. of A.gambiae found:	42
No. of A.funestus group found:	17
No. of other Anophelines found:	120 as follows:-

63	A.rufipes
27	A.coustani
15	A.marshalli
5	A.squamosus
4	A.pretoriensis
3	A.maculipalpis
2	A.cinereus
1	A.listeri.

(b) ACTIVITIES OF THE ENTOMOLOGICAL TEAM:

(i) Larval searching:

A.gambiae larvae were found at:-

Sidokodo
Magidela
Nkambeni
Mabiya
Sivunga
Diamond C
Big Bend
Mpofu

A.funestus type larvae were found at:-

Ekuthimeleni

(ii) INVESTIGATION TO DETERMINE MEMBER SPECIES OF THE ANOPHELES GAMBIAE COMPLEX:

In South Africa A.gambiae is known to be a complex of four cryptic or sibling species which cannot be separated by morphological differences. There are however genetic differences which can be determined by means of crossing to individuals of known species. Crossing any two of four known species results in Hybrid male sterility and in some of the crosses in distorted sex ratios. Thus an examination of the Hybrid male reproductive system and an estimation of the sex ratio from crosses between unknown material and individuals of known species serves to identify the unknown.

As this work is done by Dr. G. Davidson of the Ross Institute of Tropical Hygiene, London eggs of A.gambiae were sent to him. It is important to note that Species C is predominantly zoo-philic and exophilic and could possibly give rise to our sporadic cases of malaria through occasional contact with man outdoors. In this case residual spraying would be of little value.

The results of our field investigations in order to acquire A.gambiae were as follows:-

DATE	AREA	WHERE FOUND	NO. OF A.GAMBIAE	REMARKS
3-4.3.69	Magidela near Station	Cattle Kraal	1	
4-5.3.69	Magidela near drift	Cattle Kraal	4	
5-6.3.69	Magomba	Calf Net	1	
12-14.3.69	Magidela near drift	Cattle Kraal	11	
17-19.3.69	Mliba Dam	Cattle Kraal	7	
17-19.3.69	Mliba Dam	Calf Net	4	
19-20.3.69	Nkambeni on Mnyokanyoka River	Cattle Kraal	1	
26-27.3.69	Nkambeni on Mnyokanyoka River	Cattle Kraal	4	
26-27.3.69	Nkambeni on Mnyokanyoka River	Calf Net	1	
26-27.3.69	Nkambeni on Mnyokanyoka River	Man Net	1	
24-25.3.69	Mabiya Dam	Cattle Kraal	4	
25-26.3.69	Volinde	Goat Kraal	1	
	M. Johnson	Man Net	1	
31- 1.4.69	Nkambeni	Man Net	1	
31- 1.4.69	Nkambeni	Cattle Kraal	5	
22- 3.5.69	Nkambeni	Nil	Nil	
1- 2.4.69	Volinde (M. Johnson)	Goat Kraal	1	
15-16.4.69	Sivunga (Dip)	Cattle Kraal	1	
23.4.69	Mlaula	Calf Net	1	
6- 7.5.69	Abercorn	Nil	Nil	
7- 8.5.69	Magomba	Cattle Kraal	12	
	Magomba	Calf Net	16	
19.5.69	Magomba	Cattle Kraal	6	
19.5.69	Magomba	Calf Net	4	
2- 3.6.69	Magomba	Cattle Kraal	3	
16-17.6.69	Magomba	Cattle Kraal	5	
23.6.69	Magomba	Cattle Kraal	9	
29-30.5.69	Poort Zicht, Big Bend	Nil	Nil	
5- 6.6.69	Poort Zicht, Big Bend	Nil	Nil	
28-29.5.69	Ndobandoba, Big Bend	Calf Net	3	
		Cattle Kraal	1	
		Pool in Usuthu River	Larvae	
17-18.6.69	Ndobandoba, Big Bend	Calf Net	1	Min. air temperature 36°F.
19-20.6.69	Ndobandoba, Big Bend	Calf Net	23	Min. air temperature 45°F.

DATE	AREA	WHERE FOUND	NO. OF A.GAMBIAE	REMARKS
19-20.6.69	Ndobandoba, Big Bend	Cattle Kraal	3	
26-27.6.69	Ndobandoba, Big Bend	Calf Net	6	
3- 4.6.69	Sivunga, Big Bend	2 Cattle Kraals	7	
18.6.69	Sivunga, Big Bend	Nil	Nil	Day catch: 3 Cattle Kraals and 3 huts searched.
4- 5.6.69	Vokovane	Cattle Kraal	7	
	Big Bend	Calf Net	8	
18.6.69	Big Bend	Cattle Kraal and environs	15	Day catch: caught in a few minutes.
26.6.69	Vokovane, Big Bend	Cattle Kraal and environs	5 (day time)	
11-12.6.69	Mpofu	Cattle Kraal	2	
		Calf Net	1	
		Pools	Larvae	
12-13.6.69	Mpofu	Cattle Kraal	2	

(iii) INVESTIGATION TO DETERMINE VECTORS INVOLVED IN AREAS WHERE INDIGENOUS MALARIA CASES OCCURRED:

The following investigations were carried out:-

DATE	AREA	WHERE FOUND	NO. OF A.GAMBIAE	REMARKS
16-18.4.69	Tambankulu Estates	Nil	Nil	A case of malaria occurred in one of the compounds.
21-22.4.69	Crookes Plantations, Big Bend	Calf Net	1	2 cases of malaria occurred in one of the compounds.
22-23.4.69	" "	Cattle Kraal	2	" " "
13-14.5.69	Poort Zicht, Big Bend	Huts	7	A case of malaria occurred in one of the compounds.
		Man Net	2	
		Calf Net	4	" " "
20-21.5.69	Diamond C. Ranch	Cattle Kraal	6	5 cases of malaria occurred in two of the compounds.
20-21.5.69	"	Mzimpofu River	Larvae	
27-28.5.69	"	Nil	Nil	Huts and kraal sprayed by Manager with insecticide.
10-11.6.69	Balagane Ranch	Cattle Kraal	2	A Case of malaria occurred in one of the compounds.

(iv) INVESTIGATION OF A NEW MALARIA FOCUS IN THE MAINTENANCE AREA:

The following are particulars of this focus at Embikwakhe (near Matsapha):-

9.4.69 - space sprayed 17 huts - 3 A.funestus group ♀.
9.4.69 - Larval searching - 6 A.funestus type larvae.
11.4.69 - sprayed 59 huts with D.D.T.
28.4.69 - space sprayed 8 huts - 0 mosquitoes.

(v) PIT SHELTERS:

Pit shelters to study hibernation, outside resting, response to residual spraying and for obtaining live material, were dug at Magomba, Ndobandoba and Vokovane.

(c) PRECIPITIN TESTS:

Precipitin tests carried out at the Health Office, Manzini were as follows:-

DATE	LOCALITY	SOURCE	NO. OF GAMBIAE TESTED	NO. +VE FOR MAN	MAN BITING RATE	AVERAGE HUT DENSITY
25-26.3.69	Johnson - Volinde	Man Net	1	Nil	Nil	
25-26.3.69	" "	Goat Kraal	1	Nil	Nil	
25.3.69	Stokodo (Mliba)	Spray Catch	1	Nil	Nil	0.25%
26-27.3.69	Nkambeni (Mliba)	Man Net	1	Nil	Nil	
1.4.69	Stokodo (Mliba)	Spray Catch	2	0	Nil	0.66%
8.4.69	Mliba	Spray Catch	1	0	Nil	0.5%
23.4.69	Mlaula	Cattle Kraal	1	0	Nil	
7- 8.5.69	Magomba	Cattle Kraal	1	0	Nil	0%
13.5.69	Poort Zicht, Big Bend	Spray Catch	5	5	100%	0.4%
13,29,30.5.69	Sivunga, Big Bend	Spray Catch	7	0	Nil	0.4%
			NO. OF A.FUNESTUS GR. TESTED			
9.4.69	Embikwakhe (near Matsapha)	Spray Catch	1	0	Nil	0.06%

8. LECTURES:

Lectures on Malaria were given to student nurses from the Raleigh Fitkin Memorial Hospital and final year G.C.E. "O" level students from St. Michael's School, Manzini.

ANNUAL BILHARZIA REPORT

1. Bilharzia Control Pilot Project at Phonjwana:

Malacology:	Dam	Stream
16th January, 1969	0 Physopsis	0 Physopsis
28th February, 1969	0 "	0 "
28th March, 1969	0 "	0 "
9th May, 1969	0 "	0 "
13th June, 1969	0 "	0 "
25th July, 1969	0 "	0 "
22nd August, 1969	0 "	0 "
26th September, 1969	0 "	0 "
24th October, 1969	0 "	0 "
21st November, 1969	0 "	0 "
17th December, 1969	0 "	0 "

Parasitology:

39 children between the ages of 6 and 9 in grades 1 and 2 who were all negative for S.Haematobium on 11th July, 1967, were followed up and again found to be negative on 22nd October, 1968 and on 18th September, 1969.

20 new children between the ages of 5 and 10 in grade 1 were examined for S.Haematobium and 4 found to be positive. Case histories are still to be obtained, but in view of the foregoing, it is almost certain that infection was not acquired from the local dam and stream where snail control has been in operation since March, 1961.

2. Bilharzia Control Pilot Project at Nomahasha:

Malacology:

Date	Dam near Police Station	Swamp	Nkalashane Dip Dam and Pools		Application of Bayluscide	
9.1.69.	0	2 Physopsis	3 Biomph.	3 Physopsis	x	
10.2.69.	0	1 "	4 "	2 "	x	
13.5.69.	0	0 "	0 "	* 2 "	x	* 1 shedding mammalian cercariae
23.9.69.	0	4 "	0 "	0 "	x	
27.11.69.	0	0 "	0 "	1 "	x	

x = Application of Bayluscide

Parasitology:

S.Haematobium

On the 30th October, 1968 a total of 25 children (5 - 9 years) who were negative on 14th July, 1967, were re-examined and 5 found to be positive = 20%.

In addition a further 44 new children (5 - 9 years) were examined and 16 found to be positive = 36.14%.

On the 24th September, 1969 a total of 40 negatives from the October, 1968 batches were examined and 5 found to be positive = 12½%.

3. Bilharzia Control Pilot Project at Madonsa, Manzini District:

Malacology:

Madonsa Pilot Project Area:

Date	No. of Physopsis	No. of Points where Physopsis found out of a Total of 25	Application of Bayluscide	No. Shedding Mammalian Cercariae
2.1.69.	1	1	0	0
27.1.69.	16	4	x	1
4.3.69.	5	2	x	0
13.3.69.	1	1	x	0
15.4.69.	16	3	x	1
19.5.69.	4	1	x	0
11.6.69.	7	4	x	1
28.7.69.	6	3	x	0
2.9.69.	5	4	x	0
13.10.69.	6	3	x	2
20.11.69.	9	4	x	1
22.12.69.	1	1	x	1

x = Application of Bayluscide.

Parasitology:

An incidence survey compared with a previous survey revealed as follows:-

(23.10.68. 1 - 6 year olds - 8 out of 30 positive for S.Haematobium = 26.6%
(
(& 8.11.68.

(17.9.69. 1 out of 6 negatives from 1968 found positive = 16.6%
(
(& 30.9.69.

The following are results of surveys of 3 groups of pre-school children taken during the period 19.7.67. to 30.9.69., no children being repeated at any stage:-

	No. examined	No. + ve	% + ve
(19.7.67. (& 10.8.67.	32	20	62.5
(23.10.68. (& 8.11.68.	30	8	26.6
(17.9.69 (& 30.9.69.	35	7	20.0

Logoba Control Area:

Malacology:

Date	3mm	Physopsis 3mm	6mm	Total	No. Shedding Mammalian Cercariae
6.1.69	0	1	19	20	0
24.2.69.	0	3	37	40	4
22.4.69.	2	10	62(3)	74(3)	0
22.5.69.	2	6	65(1)	73(1)	1
20.6.69.	2	6	47	55	1
7.8.69.	2	4	37(2)	43(2)	0
16.9.69.	0	2	87	89	2
27.10.69.	0	0	38	38	0

() = dead snails

Parasitology:

An incidence survey compared with a previous survey revealed as follows:-

24.10.68. - 4.11.68. 1 - 6 year olds - 6 out of 63 positive for S.Haematobium = 9.5%
21.10.69. - 22.10.69. 1 - 6 year olds - 1 out of 13 negatives from 1968 found positive = 7.7%
21.10.69. - 22.10.69. 1 - 6 year olds - 9 out of 99 new children from 1968 found positive = 9.9%

4. Bilharzia Control, Bulandeni, Hhohho District:

Malacology:

Date	Mababane Stream and Pool	Dam	Application of Bayluscide	Physopsis Shedding Mammalian Cercariae
21.1.69.	0 Physopsis	0 Physopsis	0	0
6.3.69.	0 "	1 "	x	0
3.7.69.	0 "	103 "	x	2
19.8.69.	0 "	2 "	x	0
19.9.69.	0 "	3 "	x	0
28.10.69.	0 "	4 "	x	0
31.12.69.	0 "	24 "	x	0

X = Application of Bayluscide.

Parasitology:

15 children who were treated for bilharzia during 1968 and subsequently found to be negative on at least 3 occasions, were examined again on the 3rd July and 8 found to be positive. On the same day 2 infected Physopsis were found in a Dam close by. (See under "Malacology").

The breakdown in control here was due to the lapse of 4 months (Viz. March to July) during which no work was done on this project due to lack of staff and pressure of other work.

5. Snail Control, Sand River Dam, S.I.S., Tshaneni:

Surveys during January revealed that the snail population appeared to vary proportion to the amount of vegetation. Consequently it was recommended that the club foreshore be kept clear of vegetation by means of a specially designed rake. This would incidentally remove snails as well.

This procedure however was not properly carried out, with the result that during December 58 Biomphalaria were found over a distance of a few yards and the foreshore had to be treated with Bayluscide to make it reasonably safe for the aquatic sports day held there.

6. Bilharzia Control Project at Mhlume and Tshaneni:

The Mhlume Sugar Co. and C.D.C. at Tshaneni on the advise of the W.H.O. Advisor Dr. D. Forsythe, decided to appoint a technician who would carry out bilharzia control operations on these two projects. The appointee was then sent to the Health Office, Manzini where he was trained in bilharzia control techniques during the period January to March.

During March a stool survey of the school children at Mhlume Central School was commenced. The final results will be published when completed.

During the rest of the year he devoted his time to parasitological surveys of scholars at Mhlume Central School and random sampling of the various compounds at Mhlume, in order to obtain base line data, prior to commencing control measures. Routine examinations of specimens from recruits and other specimens from the clinics were also carried out.

Snail surveys of the dams and canals at Mhlume were also undertaken and as a result of these surveys the following control measures were recommended:-

All dams be fenced, canals not in actual use dried out and where this was impracticable, as in the case of drains, apply a molluscicide. Consideration, it was further recommended, should be given to the construction of swimming baths.

7. Drug Trail - Hycanthone:

A survey of children attending the Manzini Practising and Central Schools showed that 402 or 65.5% of pupils had urinary bilharzia. Of these 205 were selected for inclusion in the Hycanthone trial.

To reduce the possibility of reinfection the trial was started in August, i.e. a time of the year when transmission does nor normally take place.

The trial consisted of:-

(a) Preliminary urine survey to establish infection with S.haematobium which was graded according to egg counts in urine.

(b) Administration of Hycanthone by a single i.m. injection based on a dose of 3.Om.g./KG.

(c) Questioning of patients regarding side effects about four days after treatment.

(d) Three post treatment urine surveys commencing six weeks from date of treatment and repeated monthly.

Side effects recounted by patients were few and ranged from comparatively minor to trivial. None of those treated required treatment for side effects. Approximately 30% of patients complained of anorexia, nausea and vomiting. When questioned it was obvious they felt sufficiently wretched to feel obliged to go to bed and remain there for ten to twelve hours. These symptoms came on about three hours after treatment and usually had subsided within fifteen hours. However, a proportion of those treated stated that anorexia and nausea sometimes accompanied by one or more vomiting episodes lasted two to three days. Children who reacted usually felt too ill to continue at school and were sent home by their teachers. It has been suggested, in view of the prevalence of uncomfortable rather than dangerous side effects, that it might be a good idea to administer the drug in the afternoon or evening advising patients to go to bed as soon as possible thereafter, omitting their usual evening meal.

RESULTS					
Patients Negative for Viable Ova at:-					
Six Weeks		Ten Weeks		Fourteen Weeks	
No.	%	No.	%	No.	%
162	79	159	77.5	129	62.9

8. Radiography of Bladders:

Eighteen scholars ranging between the ages of 14 and 20 from the Manzini Central School were X-rayed for signs of calcification of bladders, ureters and kidneys. The results unfortunately proved inconclusive as, due to impacted faeces in a number of cases, pictures were obscured and thus could not be read accurately. No obvious calcification could be detected.

9. Miscellaneous Surveys:

Date	Place	Results
30. 1.69	Black Umbeluzi River Mbabane-Millers Falls	4 Anisus Sp.
30. 1.69	Pools 200 yards above Mission Falls.	1 Anisus Sp.
30. 1.69	Pools above and below lower falls.	1 Anisus Sp.
4. 2.69	Mhlambanyati weir site at Lobamba, i.e. source of Parliament Water Supply	10 Phys. 31 Lym. 5 Anisus
	Mantenga Falls Usutshwana River ± 1 mile above, to old bridge below falls 2 side pools above and 3 pools below falls.	25 Phys. 3 Lym. 8 B.Tropicus
17. 4.69	Sithobela Dam	15 Phys. 18 Biomph. 8 Lym. 1 B.forskalii.
23. 7.69	Baron von Oertzen, "Ephondvo" Dam near house.	Lymnaea only.

Date	Place	Results
23. 7.69	Swaziland Agricultural College and University Centre, Luyengo.	
	Canals	0 Snails
	Dam	-many Phys. (mammalian cercariae seen)
1. 8.69	Mliba Nazarene School (high incidence of haematuria Sidokodo River (+100 yards above road crossing)	0 Biomph. 1 Phys. 8 Lym.
	Sidokodo Dam	-64 Biomph. 11 Phys. 10 Lym.
	Sidokodo Dam Stream	-13 Biomph. 7 Phys. 12 Lym.
	Dam near School	- 0 Snails
1. 8.69	Mpisi Farm Dam	- 5 Phys.
15.10.69	Ekuthimeleni near Luve (more than 50% of the local children with haematuria).	
	Pool in Ingodlindoda Stream	4 Phys. (2 shedding mammalian cercariae.
	Pool in Mabuti Stream	12 Physopsis.
9.12.69	Mafutheni Ranch	
	Dam near House	16 B.forskalii.
9.12.69	Mpaka near Railway Bridge Borrow Pits	10 B.forskalii.
11.12.69	Woodlands Township, Mbabane Stream from source of draw-off for water supply	0 Snails.
	Adjoining Swamp	0 Snails.
11.12.69	Forbes Reef	
	Dam at old Post Office	0 Snails.
	Black Umbeluzi River (± 100 yards above bridge on main road)	0 Snails.
	Lily pond adjoining main road just south of Black Umbeluzi	0 Snails.

10. Health Education:

Lectures on bilharzia were given to scholars at the Sidney Williams Primary School, Manzini; the Nazarene High School, Manzini and to student nurses at the Raleigh Fitkin Memorial Hospital, Manzini.

11. Examination of Urines and Stools at the Health Office, Manzini:

540 urines; 31 stools; 1 rectal snip and 1 placenta were examined at the Health Office, Manzini for bilharziasis.

LEPROSY

1. ADMINISTRATIVE REPORT - LEPROSY IN-PATIENTS:

The Number of Patients:	Men	Women	Children	Total
a. in residence on January 1st	27	16	2	45
b. admitted during the year	9	5	4	18
c. re-admitted	9	3	1	13
d. discharged - free from signs of active disease	30	16	4	50
e. discharged or left - for other and non-medical reasons	0	0	0	0
f. died	0	0	0	0
g. children transferred to adult group	0	0	0	0
h. in residence on December 31st	15	8	3	26
The number of healthy children cared for while still in contact with infected persons			2	2

2. MEDICAL REPORT - IN-PATIENTS:

	Men	Women	Children	Total
The Number of Patients receiving treatment	45	24	7	76
Classification of patients:				
a. Lepromatous	17	6	1	24
b. Tuberculois	27	16	6	49
c. Indeterminate	0	0	0	0
d. Borderline	1	2	0	3

3. MEDICAL REPORT - OUT-PATIENTS:

	Men	Women	Children	Total
Number of Patients receiving treatment				
a. patients with signs of active disease on the register on January 1st	0	2	0	2
b. new patients added during the year (Ex-In-patients)	16	16	0	32
c. were removed from the register				
1. for failure to attend regularly or other reasons	0	0	0	0
2. on transfer to sympton free group	0	0	0	0
d. were still on register December 31st	No specific number - attendance is irregular.			
Number of Patients admitted to hospital or leprosarium especially for treatment of				
a. Medical complications	0	0	0	0
b. Ulcers	8	3	0	11

FACTS OF INTEREST:

Origin of Patients	
a. Pigg's Peak	7
b. Manzini	5
c. Hlatikulu	3
d. Mbabane	12
e. P.E.A.	1
f. Stegi	3

Average Age of Patient - 39

Proportion of children to total admission - 19.2%. Children - 5. Adults - 26.

Average monthly census - Men - 16; Women - 8; Children - 2.

4. LABORATORY RESULTS:

	Total	Positive	Negative
W.R.	24	5	19
Blood Smears	54	14	40
Sputum	1	1	
Biopsys	6		
Bone Operations	2 done on feet at Manzini.		

Just a brief note regarding the general conditions at Mbuluzi. Sister Elizabeth Cole is still our right-hand. It is noted that there seems a greater feeling of optimism and well-being than ever before.

Amongst the 50 discharged patients during the past year were a number who had been several years in residence. It was with mingled feelings they left their happy home and said "Good-bye" to their friends. These days most are returning to normal life thanks to modern treatment and catching cases early, prior to deformity. This makes the work amongst the leper patients gratifying indeed.

However, the number of admissions (31) has increased by three over last year and have come from all parts of Swaziland. Although leprosy seems to be under fairly good control in Swaziland, there are still enough sporadic cases coming in that are highly infectious. This was indicated in the samples taken by Dr. Colin McDougall, leprologist of Zambia, during his visit in December.

There has been considerable interest shown in the Mbuluzi Centre this year. The Geigy Co. of South Africa kindly gave us a trial run of the new drug Lamprene B663-100 mgm capsules G30320. This seem to be tolerated better than Dapsone. Mr. Cuthbert Pretious M.B.E., a longtime friend, has continued to supply comforts and various kindnesses through the Red Cross Society and his personal interest.

Various projects still keep the ambulatory patients active and happy. The farm has had one of the best crops of mealies and cattle-radishes than we've had for years. The henery was revitalized by obtaining new pullets and has continued to produce all the eggs the patients could eat as well as have hundreds of dozen to sell. The Angora goat project has now been dropped as they didn't adapt to this climate.

The spiritual life of patients has been nurtured by the regular visits of local ministers of the various churches of Swaziland. Special services were conducted by Mf. T. Ndlovu and Miss L. Masuku of the Church of the Nazarene.

CHAPTER III

GOVERNMENT AND SUBSIDISED MISSION HOSPITALS AND CLINICS:

Comparative tables for three years, setting out the staffing of Government Hospitals and the admissions, attendances, etc., at Government and Subsidised Mission Hospitals and Clinics, follows:

GOVERNMENT HOSPITALS:

	Mbabane			Hlatikulu			Mankaiana			Pigg's Peak			Goedgegun			TB Matsapha	Mental Matsapha	TOTALS		
	1967	1968	1969	1967	1968	1969	1967	1968	1969	1967	1968	1969	1967	1968	1969	1969	1969	1967	1968	1969
Hospital Staff:																				
Physiotherapist	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
Dental Officer	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
Lab. Technician	–	–	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	2
Medical Officers	6	6	8	4	3	4	–	–	–	1	1	1	1	1	–	–	–	12	11	13
Matron	1	1	1	1	1	1	–	1	1	–	1	1	–	–	–	–	–	2	5	4
Nursing Sisters	7	11	12	4	6	6	1	–	–	1	–	–	1	1	1	–	–	[illegible]	18	19
Radiographer	1	2	2	–	2	2	–	–	–	–	–	1	–	–	–	–	–	1	4	5
Senior Radiographer	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
Housekeeper	1	1	1	1	1	1	–	–	–	–	–	–	–	–	–	1	–	2	3	3
Medical Assistant	–	–	–	1	1	1	–	–	–	–	–	–	–	–	–	–	–	1	1	1
Lab. Assistant	2	2	1	1	1	1	–	–	–	1	1	1	–	–	–	–	–	3	3	3
Dispensers	3	3	3	2	2	2	–	–	–	–	–	1	–	–	–	–	–	5	5	6
Nurses	49	76	[illegible]	40	48	60	7	10	10	9	17	18	4	7	7	5	3	109	170	200
Nurse Aides	3	15	20	–	13	14	1	2	2	–	2	2	–	1	1	4	–	4	37	43
Ambulance Drivers	3	5	6	3	2	3	1	1	1	1	1	1	1	1	1	–		9	10	12
Orderlies	18	29	34	12	19	20	3	3	4	3	6	6	2	4	4	4	–	39	64	72
Hospital Supervisor	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	1

Notes: Pharmacists stationed at Central Medical Stores; Senior Radiographer covers the Territory; One Housekeeper shared by T.B. and Mental Hospitals, 3 Pupil Dispensers stationed at Central Medical Stores; Nurse Aides now include old classification of Outpatient Attendants; Ambulance Drivers – there are two extra drivers at Central Medical Stores who can be called upon.

	Mbabane			Hlatikulu			Mankaiana			Pigg's Peak			Goedgegun			TB Matsapha	Mental Matsapha	TOTALS		
	1967	1968	1969	1967	1968	1969	1967	1968	1969	1967	1968	1969	1967	1968	1969	1969	1969	1967	1968	1969
BEDS:																				
a) Full-Paying	14	14	14	8	8	8	–	–	–	–	–	–	–	–	–	–	–	22	22	22
b) Part-Paying	156	161	298	134	155	160	33	33	41	50	50	50	12	12	15	200	200	415	811	964
ADMISSIONS:															INCLUDED IN FIGURES FOR HLATIKULU HOSPITAL					
a) Full-Paying	620	591	549	94	204	168	–	–		–	–	–	–	–		–	–	714	795	717
b) Part-Paying	6,289	8,011	[illegible]	4,862	4,121	4,280	1,488	1,837	1,422	1,538	1,752	1,407	1,524	969		362	189	15,701	17,334	[illegible]
DEATHS:	228	380	[illegible]	164	128	171	7	16	Not Available	39	56	73	41	40		4	3	489	638	556
OPERATIONS:																				
a) Major	508	484	634	135	143	228	–	–	–	2	2	–	–	–		–	–	503	629	862
b) Minor	738	733	762	811	755	1,065	–	–	–	76	68	70	–	–		–	–	1,257	1,556	1,897
X-RAY:																				
a) Examinations	7,553	8,271	8 504	3,901	4,786	4,713	–	–	–	955	726	750	–	–		–	–	7,441	13,783	13,967
b) Screening	52	11	87	–	–	–	–	–	–	–	–	–	–	–		–	–	55	11	87
OUT-PATIENTS:																				
1st Attendances:																				
a) Full-Paying	4,383	3,591	3,284	217	526	409	22	20		158	78		363	258		–	–	5,143	4,473	3,693
b) Part-Paying	20,037	20,062	22,935	10,964	10,051	12,276	8,054	6,906	4,875	7,761	8,269	7,376	10,028	10,057		667	–	56,844	55,813	48,129
Sub.Attendances:																				
a) Full-Paying	2,997	1,395	1,435	140	521	510	6	16		5	33		487	110		–	–	3,635	2,075	1,945
b) Part-Paying	20,734	15,776	13,112	7,767	8,508	9,874	2,843	2,703	975	1,848	1,530	3,647	9,431	6,847		–	–	42,623	35.364	27,608
GRAND TOTAL	48,151	39,924	41.366	19,088	19,606	23,069	10,925	9,645	5,850	9,772	9,910	11,023	20,309	17,272		667	–	108,245	97,725	81,975

SUBSIDISED MISSION HOSPITALS:

	Raleigh Fitkin Memorial Hospital:			Good Shepherd Hospital:			TOTALS:		
	1967	1968	1969	1967	1968	1969	1967	1968	1969
BEDS:									
a) Full-Paying	23	22	22	5	5	5	28	27	27
b) Part-Paying	297	300	300	62	62	62	359	362	362
ADMISSIONS:									
a) Full-Paying	573	508	515	147	76	92	672	584	607
b) Part-Paying	5,966	5,833	4,913	1,478	1,158	1,469	7,444	6,991	6,382
DEATHS:	339	382	238	31	53	65	370	435	303
OPERATIONS:									
a) Major	590	485	592	28	2	50	618	487	642
b) Minor	950	984	956	202	194	210	1,152	1,178	1,166
X-RAY:									
a) Examinations	4,460	5,049	4,579	2,025	1,027	668	6,485	6,076	5,247
b) Screening	-	4	-	-	-	-	-	4	-
OUTPATIENTS:									
1st Attendances:									
a) Full-Paying	2,320	2,503	2,426	1,191	996	588	3,511	3,499	3,014
b) Part-Paying	8,497	12,132	11,233	14,226	10,362	6,073	22,723	22,494	17,306
Sub-Attendances:									
a) Full-Paying	2,868	2,555	2,163	414	357	272	3,282	2,912	2,435
b) Part-Paying	15,444	15,235	10,887	5,214	3,138	4,559	20,658	18,373	15,446
GRAND TOTALS:	29,129	32,425	26,709	21,045	14,853	11,492	50,174	47,278	38,201

SUBSIDISED MISSION CLINICS:

	Totals:			Mission Totals:		
Nazarene Missions:						
Stegi	6,488	6,528	6,570			
Engingeni	3,607	3,452	3,204			
Pigg's Peak	4,065	4,567	4,467			
Mliba	2,167	2,347	2,145			
Mafutheni	1,460	1,252	1,822			
Bhekinkosi	1,786	2,458	321			
Balegane	1,981	2,583	2,945			
Malinda	3,269	3,283	3,846			
Mayiwane	4,761	7,271	8,432			
Tambankulu	9,463	9,941	11,066			
Lalela	1,364	942	638			
Tembelihle	580	1,661	1,661			
Manzana	453	315	85			
Kashewula	598	455	1,512			
Engoulwini	585	672	1,586			
Esigcaweni	1,199	830	1,167	44,237	48,638	51,467
Roman Catholic Missions:						
Our Lady of Sorrows	8,955	9,070	9,462	33,360	14,875	12,312
St. Juliana	7,244	4,737	2,850			

GOVERNMENT CLINICS	TOTAL ATTENDANCES			DISTRICT TOTALS		
	1967	1968	1969	1967	1968	1969
HHOHHO DISTRICT						
Hhohho	15,457	14,425	11,851			
Lester	7,737	7,971	6,546			
Mhlangatane	13,413	10,815	8,997			
Nkaba	3,048	2,522	3,964	39,655	35,733	31,358
MANZINI DISTRICT						
Lobamba	-	-	9,961			
Mangcongco	3,008	2,610	2,704			
Dwalile	5,553	4,958	4,388			
Luyengo	15,094	11,061	11,140			
Mhlangatshe	5,856	4,063	3,870			
Mgazini	1,414	1,572	407			
Endinilembe	2,149	1,266	650	33,074	25,530	33,120
SHISELWENI DISTRICT						
Gege	6,503	7,865	7,068			
Hluti	7,629	9,442	8,966			
Lavumisa	-	2,528	9,693			
Mahamba	6,615	6,983	7,170			
Mhlotsheni	8,366	8,558	11,447			
Edwaleni	6,109	7,676	6,645			
New Haven	13,824	7,378	11,737	49,046	50,430	62,726
LUBOMBO DISTRICT						
Nomahasha	3,195	2,585	2,481			
Lubuli	6,757	6,140	7,209			
Sipofaneni	12,533	12,087	11,878			
St. Philips	4,483	4,773	3,721	26,968	25,585	25,289
Sidvokodvo Railway Clinic (Manzini District)		11,132	9,272			

CHAPTER IV

MEDICO-LEGAL POSTMORTEM EXAMINATIONS

The number of medico-legal postmortem examinations carried out at Government and subsidised Mission Hospitals from 1967 to 1969 were as follows:-

	1967	1968	1969
Mbabane Hospital	43	44	
R.F.M. Hospital	77	127	102
Pigg's Peak Hospital	67	37	
Good Shepherd Hospital	70	36	
Hlatikulu Hospital	44	52	59

ASSAULT AND RAPE EXAMINATIONS

	1967	1968	1969
Mbabane Hospital	398	209	
Pigg's Peak Hospital		478	
R.F.M. Hospital		428	442

DRIVING UNDER THE INFLUENCE OF LIQUOR OR DRUG EXAMINATIONS

	1967	1968	1969
Mbabane Hospital	37	7	
R.F.M. Hospital		52	57
Hlatikulu Hospital			5

All the above examinations are done at the request of the police.

CHAPTER V

MATSAPHA MENTAL HOSPITAL

1. STATISTICS:

(a)

	Male	Female	Total
Present on 1.1.1969	87	57	144
Admitted during 1969	148	41	189
Discharged home	107	41	148
Discharged via Gen. Hospitals	6	1	7
Discharged after absconding	8	1	9
Died of natural causes	1	2	3
In-patients present on 31.12.1969	113	53	166

(b) Number of in-patient days:

Male - 37943 at an average of 161 days per patient
Female - 23280 at an average of 237 days per patient
Total - 61223 at an average of 184 days per patient

The above averages include those of 82 chronic patients in residence over twelve months who are likely to remain in hospital indefinitely.

This group accounts for 29930 in-patient days of a total of 61223 and with chronic patients excluded the figures are as follows:

Male - 185 patients - 19693 in-patient days - average 106
Female - 66 patients - 11600 in-patient days - average 176
Total - 251 patients - 31293 in-patient days - average 124

(c) Division of in-patients according to status:

Male:	Certified:	Voluntary:	Temp:	Total:
Present 1.1.1969:	56	30	1	87
Admitted during 1969:	69	76	3	148
Discharged home:	54	52	1	107
Discharged via Gen. Hospitals:	5	1	Nil	6
Discharged after absconding	8	Nil	Nil	8
Died:	1	Nil	Nil	1
Present 31.12.1969:	57	53	3	113
Female:				
Present 1.1.1969:	40	17	Nil	57
Admitted during 1969:	30	10	1	41

2/.....

Discharged home	23	18	Nil	41
Discharged via Gen. Hospitals	1	Nil	Nil	1
Discharged after absconding	1	Nil	Nil	1
Died:	1	1	Nil	2
Present 31.12.1969	44	8	1	53

(d) Division of patients into age groups:

	Present on 1.1.1969	Admitted	Discharged	Absconded and discharged	Died	No. on 31.12.69.
Male:						
Age group 15-19	4	15	8	Nil	Nil	11
-"- -"- 20-29	18	53	41	4	Nil	26
-"- -"- 30-39	35	45	38	3	Nil	39
-"- -"- 40-59	21	25	18	1	Nil	27
-"- -"- 60 and over	9	10	8	Nil	1	10
Total:	87	148	113	8	1	113
Female:						
Age group 15-19	1	4	1	Nil	Nil	4
-"- -"- 20-29	10	16	11	1	Nil	14
-"- -"- 30-39	18	4	9	Nil	Nil	13
-"- -"- 40-59	23	14	18	Nil	1	18
-"- -"- 60 and over	5	3	3	Nil	1	4
Total:	57	41	42	1	2	53
Male & Female combined:						
Age group 15-19	5	19	9	Nil	Nil	15
-"- -"- 20-29	28	69	52	5	Nil	40
-"- -"- 30-39	53	49	47	3	Nil	52
-"- -"- 40-59	44	39	36	1	1	45
-"- -"- 60 and over	14	13	11	Nil	2	14
Total:	144	189	155	9	3	166

DIAGNOSIS.

It has not been possible to clearly diagnose all mental disorders of patients referred for treatment.

This is mainly due to the present practice of sending patients to the mental hospital through non-medical channels, Police, D.C., etc., without providing a comprehensive medical history on which an accurate diagnosis could be established.

There is however clear evidence that avitaminosis, combined with alcohol and drugs (dagga) are an important factor in, if not entirely the cause of, Psychotic disorder in the majority of cases admitted especially in the 30 to 60 age groups.

TREATMENT

Drug Therapy, Electro-Convulsive Therapy and a combination of both has been carried out throughout the year with good results as figures under 1.(a) indicate.

Short term in-patient treatment followed by outpatient attendances has been tried with success.

Best results were shown by patients living within easy reach of major hospitals - Mbabane and Matsapha.

This scheme could be enlarged to relieve pressure on the mental hospital and for the benefit of a great number of patients by holding regular monthly psychiatric outpatient clinics at least in districts with a high incidence of toxic psychosis such as Piggs Peak and Hlatikulu.

It will be observed from the given data that the number of in-patient days has decreased considerably due to the above method of treatment.

It could be expected that with the establishment of psychiatric clinics as suggested, the number of patients requiring admission and re-admission to hospital would also be greatly reduced.

The physical condition of in-patients has remained good during the year as is indicated by the low death rate.

A further indication of improved conditions in general is the number of patients undergoing voluntary treatment in the hospital and the low incidence of attempted escapes by certified patients.

This should be viewed from the point that, as opposed to a prison, the mental hospital is primarily concerned with the treatment and rehabilitation of mental patients and less with their secure detention.

GENERAL.

Occupational activities were again concentrated on maintenance of grounds, kitchen, laundry etc., and the now well established vegetable garden has produced over 26.ooo lb. of fresh vegetables for the consumption by mental and T.B. patients.

The ladies of the Women's Institute and the Red Cross paid regular weekly visits to the patients whom they supplied with fruit, sweets and other comforts.

The Hon. the Minister of Health Dr. Nxumalo paid periodic visits to the hospital, the last visit being during Christmas when he distributed presents to all patients at a party organised and attended by members of the W.I., Red Cross and hospital staff.

A complete set of football jerseys for two teams were presented for the use by patients. In return the patients presented the Minister and the wife of the Hon. the Prime Minister with a set of table mats made by the patients themselves.

The patients and staff of the Matsapha Mental Hospital are extremely grateful to the ladies of the W.I. and the Red Cross for their sustained efforts, and to the Minister of Health for his personal interest in the welfare of mental patients.

CHAPTER VI

PUBLIC HEALTH UNIT

ANNUAL RETURNS FOR MBABANE, KING SOBHUZA II & HLATSI CENTRES - 1969

ATTENDANCE					IMMUNIZATIONS											
TOTAL ATTENDANCE	ANTE NATAL		MATERNAL & CHILD WELFARE		D. P. T.		POLIO		T. A. B.		B.C.G.	SMALL POX	CHOLERA	YELLOW FEVER	HONG KONG "FLU"
	First Attendance	Subsequent Attendance	First Attendance	Subsequent Attendance	First Dose	Subsequent Doses	First Dose	Subsequent Doses	First Dose	Subsequent Doses					
34,021	2,066	6,501	2,746	17,240	889	954	1,343	1,376	373	609	286	3,064	2	8	389

PUBLIC HEALTH UNIT

(CONTINUED)

MORBIDITY

All Other Syphilis	94
Gonorrhoea	19
All Other V. Diseases	32
Whooping Cough	42
Tape Worm	3
Chicken Pox	5
Scabies	13
Pellagra	5
Kwashiorkor	31
Malnutrition Unqualified	31
Anaemia Unspecified	170
Asthma	45
Epilepsy	4
Inflammatory Diseases of Eye	16
Otitis Media	16
Other Diseases of Heart	2
Hypertension	3
Other Diseases of Circulatory System	6
Influenza	79
Broncho Pneumonia	62
Respiratory Tract Infection	11
Other Respiratory Diseases	79
P.U.O.	30
Gastro-Enteritis 4 weeks - 2 years	121
Gastro-Enteritis over 2 years	5
All Other Genito-Urinary System Infection	131
Abortions	1
Other Diseases - Early Infancy	1
All Other Undefined Causes of Morbidity	2

CHAPTER VII

LABORATORY SERVICES

During 1969 great progress was made at the three Laboratories due to the gift of expensive apparatus without which some of the tests could not be done in the past. Expansion has been helped too, by funds from WHO and UNICEF. Work has been greatly handicapped by the lack of trained staff.

At Hlatikulu Hospital many new tests were introduced during 1969 after the completion of the Laboratory.

At Mbabane Hospital, the Laboratory is still under construction and the staff is carrying on under very difficult conditions. Because of the shortage of staff many tests have had to be sent to Manzini. This should be rectified early in 1970.

During 1969 two trainees passed their Laboratory Assistant's examinations, and it is hoped that they will now be given an opportunity for further study. One Laboratory Assistant passed a bar examination.

Two microscopists from the T.B. Control Laboratory, were sent to Lagos for three months on a WHO Polyvalent Microscopist Course (Level D).

It should be noted that the Pathology Laboratory was transferred to Manzini in 1968 and that together with the Laboratory attached to the Tuberculosis Control Project became the Central Public Health Laboratory for Swaziland. Mr. Cotton, a WHO Laboratory Technologist, was placed in charge and Mrs. Gibbon, a Government Laboratory Technologist, was transferred from Mbabane to assist with the work and training of local Laboratory Assistants.

CENTRAL PUBLIC HEALTH LABORATORY RETURNS

Name of Test	Number
V.D.R.L. Tewt	7,461
Widal (TMX)	915
Vi test for typhoid carriers	14
Grouping ABO and Anti-D	1,298
Test for Infectious Mononucleosis	3
Blood Chemistry:-	
Glucose	94
Urea	100
Protein-Albumin/Globulin Ratio	125
Protein Electrophoresis	33
Uric Acid	42
Cholesterol	84
Inorganic Phosphates	8
Blood Calcium	46
Bilirubin (Total & Conjugated)	137
Acid and Alkaline Phosphatase	147
Thymol Turbidity	13
Transaminase S G O T	76
Amylase	19
R.A. Factor for Rheunatoid Factor	14
C - Reactive Protein	11
Electrolytes Sodium & Potassium	24
Blood Chloride	1
Creatinine (Blood & Urine)	0
Spinal Fluid Chemistry	75
Body Fluids Chemistry	10
Tests on Pasteurised Milk Methylene Blue & Phosphatase	61
Fat content of Milk	28
Bacteriology of Milk	185
Bacteriology of Water	247

CENTRAL PUBLIC HEALTH LABORATORY RETURNS

(CONTINUED)

Name of Test	Number
Blood Culture	186
Stool Culture	127
Stool Microscopy	365
Urine, Micro & Chemistry	556
Urine Culture	139
Culture, Swab, Sputum, etc. Non T.B.	364
Sensitivity Tests	317
Smears for Microscopy	115
Urine for Bilharzia	95
Full Blood Count	106
Differential White Cell Count only	40
Haemoglobin only	236
E.S.R	18
Platelet Count	6
Pregnancy Test	52
Semen Count	7
Smears for Cytology	191
Smears for Leprosy	33
Smears for Malaria	2
Culture for T.B.	14, 721
Sensitivity on Cultures for T.B.	1,252

HLATIKULU LABORATORY RETURNS

Haemoglobins	2,025
Packed Cell Volume	47
M.C.H.C.	47
E.S.R.	252
White Cell Count	484
Differential Count	216
Film Appearance	86
Blood Grouping & R.H.	65
Cross-Matching	2
Platelet Count	3
Prothrombin Index	1
Malarial Parasites	14
Blood Sugar	20
Blood Urea	25
Electrolytes	6
C.S.F. Cell Count	50
C.S.F. Protein	34
C.S.F. Globulin	34
C.S.F. Chlorides	34
C.S.F. Cultures	12
Serum Bilirubin	1
Serum Cholesterol	3
Esbach's Test	5
Urinary Bilirubin	17
Urinary Acetone	3
Urinary p.H	318
Urinary Sugar	2,263
Urinary Protein	2,264
Urinary Microscopy	3,384
Urinary Bile Salts	7
Urinary Specific Gravity	2
Urinary Cultures	55
Stools Microscopy	524
Stools Cultures	42
Bilharzia	233
Bence Jones Protein	1

HLATIKULU LABORATORY RETURN
(CONTINUED)

Name of Test	Number
Occult Blood	15
Sensitivity Tests	62
Gram Stain	961
Z/N Stain for A.F.B.	85
Pregnancy Test	125
C-Reactive Protein	2
Rheumatoid Factor	1
Semen Analysis	3
Serum Protein	9
Pus & Vaginal Swab Cultures	8
Blood Culture	7

R.F.M. HOSPITAL LABORATORY RETURNS

Name of Test	Number
Haemoglobin (excluding blood donors)	2,728
Haematocrit	58
Red Blood Cell Count	17
E.S.R.	183
White Blood Cell Count	1,910
Differential (White Cells)	1,190
Prothrombin Time	32
Bloodgroup (excluding blood donors)	536
Cross Matches	677
Blood Sugars	72
S.G.O.T.	30
Blood Urea Nitrogen	51
Urinanalysis (Routine)	6,685
Pregnancy Test	149
Platelete Count	9
Retics.	3
Clotting Time	11
Bleeding Time	2
Coombes	3
Glucose Tolerance	3
Red Cell Morphology	4
Serum Bilirubin	13
Amylase	1
Total Proteins	1
Faeces Occult Blood	7
Stool-Bile	5
Malaria Smears	10
Stool - Ove & Parasites	7
Vaginal fluid for Trichomonas	5
Vaginal fluid for Sperms	1
E.C.G.	63
Tests on Donors	1,583

In addition 579 blood donations. 551 pints transferred.

CHAPTER VIII

FINANCE

The financial statement of the Ministry for the period 1st April, 1969 to 31st March, 1970 is as follows:-

	1968	1969/70
Hospital, Health Centre and Other Fees	R 40,014	R 57,795
Expenditure:		
Personal Emoluments	386,784	557,175
Travelling Expenses	13,430	19,460
Operation and Maintenance of Vehicles	5,415	7,395
Other Transport Charges	5,698	3,450
Allowances and Fees – Medical	1,502	1,620
Maintenance of Patients – Drugs	141,097	155,053
" " " Feeding		67,817
Maintenance of Mental Patients	12,633	14,031
Lighting and Heating	26,602	49,774
Hospital Equipment	24,598	25,026
Upkeep of Grounds	703	447
Temporary Reliefs	19,758	36,567
Anti-Malaria Measures	5,313	7,962
Bilharzia Control	–	–
Laboratory Services	2,411	3,890
Public Health Measures	300	2,496
Grants to Missions	46,865	76,246
High Commission Territory Nursing Council	–	610
Office Equipment	1,442	3,204
Uniforms and Protective Clothing	7,226	10,447
Maintenance of Hospital Equipment	1,963	1,915
Labour	–	21,890
Panel of Visiting Specialists	–	1,572
Purchase of Replacement Vehicles	5,090	13,675
	R701,680	R1,081,722

CONCLUSION:

I wish to express my sincere appreciation of the loyal and efficient manner in which members of the Ministry carried out their duties during the year.

(J. M. L. Klopper)
DIRECTOR OF MEDICAL SERVICES

APPENDIX I

MINISTRY OF HEALTH STAFFING
(AS AT 31.12.69)

Minister of Health - The Hon. Dr. A.M. Nxumalo, M.H.A.

POST	HOLDER	STATION
Permanent Secretary	Dr. F. Friedman	Ministry of Health
Director of Medical Services	Dr. J.M.L. Klopper	" " "
Consulting Opthamic Surgeon (Part Time)	Dr. G. Trampton	-
Senior Medical Officers (2)	Dr. S.P.N. Shongwe	Mbabane
	Dr. P.W.B. Pease (Actg)	Hlatikulu
Medical Officers (15)	Dr. Y. Kaplan	Manzini
	Dr. W.J. Downing	Mbabane
	Dr. E.V. Blekie	Mbabane
	Dr. M.E. Hague Moss (Temporary)	Mbabane
	Dr. K.P. Mokhobo	Mbabane
	Dr. E. Rwairwai	Pigg's Peak
	Dr. P. Moss (Temporary)	Hlatikulu
(Dental Officer)	Dr. P.S. Dlamini	Mbabane
	(7) Vacancies	
Senior Medical Officer of Health	Dr. G.G. Murphy	Ministry of Health
Medical Officer of Health	Dr. T.G. Behan	Manzini
Hospital Administrator (SCAAP)	Mr. K.H.P. Jenkin	Ministry of Health
Principal	Mr. S. Dube	" " "
Executive Officer	Mr. J.L. Nyembe	" " "
Pharmacist/Storekeeper (2)	Mr. G.R. Gibbon	Central Medical Stores
	Mr. J.L. Vander Vyver	" "
Laboratory Technologist (3)	Mrs. M. Gibbon (Part Time)	Manzini
	Mr. M. Ndlela	Hlatikulu
	Vacant	
Senior Radiographer	Mrs. R. Elyan (Temporary)	Mbabane
Radiographer (5)	Mrs. A. Kanyile	Overseas Course
	Mr. D. Shabangu	Hlatikulu
	Mrs. B. Dlamini	Mbabane
	Mrs. S.M. Tshabalala	Mbabane
	Mrs. H.S. Ntsele	Hlatikulu

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Senior Health Inspector	Mr. C.D. Nxumalo	Ministry of Health
Health Inspector (4)	Mr. D.M. Eckard	Manzini
	Mr. L.N. Mbabama	Goedgegun
	Mr. L.L. Mtetwa	Stegi
	Mr. E.S. Magubane	Manzini
Physiotherapist	Miss S. Evans (I.V.S.)	Mbabane
Mental Hospital Supervisor	Mr. K. Kral	Matsapa
Hospital Secretary	Mr. M.A. Baker	Mbabane
Asst. Accountant/Accountant (3)	Mr. J. Hertslet	Ministry of Health
	Mr. P. Mbamali	" " "
	Mr. W. Zwane	" " "
Personal Secretary Grade I (2)	Miss A. Cole	" " "
	Mrs. V. Salisbury	" " "
Grade II (2)	Mrs. S. Wiggill	" " "
	Mrs. A. Groening	Mbabane
Matron Grade I (2)	Mrs. A.C.T. Mabuza	Hlatikulu
	Mrs. P. Mdiniso	Unpaid leave
Grade II (4)	Mrs. V.W.S. Mabuza	Pigg's Peak
	Mrs. E. Mtetwa	Mankaiana
	Mrs. M.B. Masipa	Mbabane
	Mrs. N. Dludlu	Mbabane (P.H.U.)
Nursing Sisters (20)	Mrs. G.T. Abrahams	Hlatikulu
	Mrs. D. Bhengu	Mbabane
	Mrs. A. Dlamini	Mbabane (P.H.U.)
	Mrs. F. Dlamini	Hlatikulu
	Mrs. M. Gininda	Mbabane
	Mrs. S. Khoza	Mbabane
	Miss J. Khumalo	Mbabane
	Mrs. A. Mahluza	Mbabane
	Mrs. T. Masuku	Hlatikulu
	Mrs. E. Mtetwa	Goedgegun
	Mrs. E. Nxumalo	Mbabane
	Mrs. I. Shilubane	Hlatikulu
	Mrs. E. Simelane	Mbabane
	Mrs. J. Zwane	Mbabane
	Mrs. S. Kunene	Hlatikulu
	Mrs. J. Mamba	Hlatikulu
	Mrs. G. Nkosi	Mbabane
	Mrs. S.C. Tshabalala	Hlatikulu
	Mrs. E. Dlamini	Hlatikulu
	Vacant	
Staff Nurses (214)	207 in Post	
Medical Assistant	Mr. A.F.K. Phiri	Hlatikulu

Housekeeper (3)	3 in Post
Handymen (3)	3 in Post
Accounts Officers (8)	8 in Post
Clerical Officers (15)	14 in Post
Storemen (4)	4 in Post
Dispenser (10)	10 in Post
Laboratory Assistant (5)	5 in Post
Microscopists (7)	7 in Post
Health Assistants (30)	28 in Post
Ambulance Drivers (12)	12 in Post
Mental Patient Attendants (13)	12 in Post
Typist (2)	2 in Post
Senior Cook (2)	2 in Post
Senior Orderly (3)	3 in Post
Driver (8)	8 in Post
Senior Telephone Operators (4)	4 in Post
Telephone Operators (2)	2 in Post
Hospital Orderlies (70)	68 in Post
Nurse Aides (43)	41 in Post
Cooks (16)	16 in Post
Housemaids (7)	7 in Post
Laundresses (23)	23 in Post
Seamstresses (7)	7 in Post
Nightwatchmen (12)	12 in Post
Groundsmen (6)	6 in Post
Messengers (2)	2 in Post
Wardmaid (3)	3 in Post

APPENDIX II.

RETURN OF CASES TREATED - GOVERNMENT AND MISSION HOSPITALS - 1969.

Detailed List No.	Group Causes	Out-patients	In-patients	Total Cases	Deaths
001-008	T.B. Respiratory System			900	133
010	T.B. of Meninges or C.N.S.	-	-	-	-
011	T.B. of Intestine & Peritoneum	-	-	-	-
012-013	T.B. of Bones & Joints	-	-	-	-
014-019	T.B. - All Other Forms	164	198	362	11
020	Congenital Syphilis	-	-	-	11
021	Early Syphilis	512	160	672	-
024	Tabes Dorsalis	1		1	-
022-023) 026-029)	All Other Syphilis	263	35	298	-
030-035	Gonoccal Infection	2,369	280	2,649	-
036-039	Other Venereal Diseases	287	113	400	-
040-041	Enteric Fever	-	251	251	14
044	Brucellosis	-	3	3	-
045	Bacillary Dysentery	335	260	595	7
046	Amoebiasis	106	186	292	8
052	Erysipelas & Septicaemia	6	10	16	-
055	Diphtheria	-	2	2	2
056	Whooping Cough	419	199	618	6
057	Meningococcal Infections	-	7	7	-
060	Leprosy	4	9	13	-
061	Tetanus	-	48	48	28
080-083	Poliomyelitis & Effects of Polio	12	30	42	1
084	Smallpox (Variola Minor)	13	11	24	-
085	Measles	625	1,265	1,890	14
092	Infectious Hepatitis	18	55	73	-
104	Tick-Bite Fever	12	6	18	-
116	Malaria	-	11	11	-
123-1	Bilharzia (Vesical)	796	283	1,079	1
126	Tape Worm	256	107	363	-
130-0	Ascariasis	-	210	210	-
124-128) 130-1)	Other Helminthic Diseases	108	25	133	1
049	Poisoning - Food	19	47	66	-
087	Chicken Pox	237	39	276	-
131	Dermatophytosis	146	17	163	-
135	Scabies	236	40	276	-
137-138	Other Infective and Parasitic Diseases	46	29	75	3
140-150	Malignant Neoplasms of (a) Mouth, Pharynx, Oesophagus	3	13	16	3
151-154	(b) Stomach, Intestine, Rectum	2	14	16	11
161-163	(c) Larynx, Trachea, Lung	-	10	10	4
170	(d) Breast	10	14	24	4
171	(e) Cervix Uteri	11	43	54	4
172	(f) Body of Uterus	2	3	5	1
177	(g) Pristate	4	20	24	6
191-9	(h) Skin	-	5	5	1
196-7	(i) Bone & Connective Tissue	-	10	10	1
199	(j) All Other Sites	2	32	34	9
204	Leukaemia	1	-	1	-
210-239	Benign Neoplasma	64	107	171	-
250-251	Non-Toxic Goitre	40	26	66	1
252	Thyrotoxicosis	8	20	28	1
260	Diabetes Mellitus	50	65	115	5
281	Pellagra	720	197	917	2
282	Scurvy	-	3	3	-
286-6	Kwashiorkor	362	444	806	45
286-5	Malnutrition unqualified	681	611	1,292	40
290	Hyperchromic Anaemias	15	2	17	-
291	Hypochromic Anaemias	5	7	12	-

Anaemia unspecified/...

Detailed List No.	Group Causes	Out-patients	In-patients	Total Cases	Deaths
292-293	Anaemia, Unspecified	-	74	74	3
241	Asthma	367	160	527	3
240,242) 245)	Other Allergic Disorders	319	97	416	-
300-309	Psychoses	70	57	127	-
310,324) 326)	Psychoneuroses & Hysteria	106	61	167	-
325	Mental Deficiency	75	88	163	3
330-334	Vascular Lesions of C.N.S.	5	21	26	5
340	Meningitis (Non-Meningococcal)	6	18	24	4
353	Epilepsy	95	90	185	2
370-379	Inflammatory Diseases of Eye	1,002	291	1,293	-
385	Cataract	35	108	143	-
387	Glaucoma	-	21	21	-
390	Otitis Externa	336	103	439	-
391-393	Otitis Media & Mastoiditis				
380-384	All Other Diseases of Eye	433	484	917	1
341-344	Other Diseases of C.N.S. and Sense Organs	152	200	352	5
400-402	Rheumatic Fever	107	19	126	-
410-416	Chronic Rheumatic Heart Disease	58	92	150	2
420-422	Arterio-Sclerotic & Degenerative Heart Disease	33	57	90	6
430-434	Other Diseases of Heart	113	131	244	24
440-443	Hypertension & Heart Disease	53	44	97	1
444-447	Hypertension	339	160	499	4
150-456	Diseases of Arteries	14	31	45	4
460-468	Other Diseases of Circulatory System	158	195	353	6
470-475	Acute Upper Respiratory Tract Infections including Acute Tonsillitis	3,396	756	4,152	-
480-483	Influenza	2,033	488	2,521	-
490	Lobar Pneumonia	138	136	274	4
491	Bronco-Pneumonia	492	520	1,012	23
492-493	Atypical Pneumonia	32	168	200	21
500	Acute Bronchitis	2,411	745	3,156	3
501-502	Bronchitis, Chronic and Unspecified	1,210	817	2,027	2
512	Chronic Pharyngitis and Chronic Tonsillitis	595	135	730	-
518-521	Empyema & Lung Abscess	3	32	35	1
519	Pleurisy	86	41	127	1
523	Pneumoniasis	-	1	1	-
520-522	Other Respiratory Diseases	1,700	138	1,838	7
530	Dental Caries	4,817	981	5,798	-
531-535	All Other Diseases of Teeth and Gums	1,431	527	1,958	2
540	Gastric Ulcer	102	75	177	1
541	Duodenal Ulcer	40	38	78	2
543	Gastritis & Duodenitis	771	624	1,395	10
550-553	Appendicitis	86	144	230	3
570	Intestinal Obstruction	28	27	55	3
560	Hernia	52	151	208	2
570-0	Gastro-Enteritis (4 weeks to 2 years)	3,050	1,388	4,438	62
570-1	Gastro-Enteritis (over 2 years)	2,671	788	3,459	32
572	Chronic Enteritis & Colitis	253	117	370	-
581	Cirrhosis of Liver	67	113	180	27
584-585	Cholecystitis	31	37	68	1
536-539) 544-573) 580-582) 583-586) 587)	Other Diseases of Digestive System	1,6[illegible]	4[illegible]	2,0[illegible]3	1[illegible]

Detailed List No.	Group Causes	Out-patients	In-patients	Total Cases	Deaths
590	Acute Nephritis	30	48	78	1
591-594	Chronic Nephritis	9	38	47	2
600	Infections of Kidney	176	107	283	2
602-604	Calculi of Urinary System	11	9	20	-
610	Hyperplasia of Prostate	24	14	38	2
620-621	Diseases of Breast	85	47	132	-
613	Hydrocele	71	81	152	-
634	Disorders of Menstruation	1,466	366	1,832	-
601,603) 605,609) 611,612) 614-617) 622-633)	All Other Diseases of Genito-Urinary System	3,401	2,133	5,534	14
660	Normal Deliveries	-	8,150	8,150	-
671) 673-678)	Deliveries with Complications	-	897	897	-
640,641	Sepsis of Pregnancy	76	40	116	1
642	Toxaemia of Pregnancy	25	27	52	-
643-644) 670,672)	Haemorrhage of Pregnancy and Childbirth	10	4	14	-
650	Abortion	146	536	682	3
651	Abortion with Sepsis	19	31	50	1
690-698	Infections of Skin and Subcutaneous Tissues	1,816	667	2,483	3
720-727	Arthritis & Spondylitis	280	189	469	2
726,727	Muscular Rheumatism and Rheumatism Unqualified	1,001	451	1,452	-
730	Osteomyelitis & Periostitis	42	85	127	1
737,745) 749)	Ankylosis and acquired Musculo-Skeletal Deformity	32	65	97	-
700-714	All Other Diseases of the Skin	982	326	1,308	-
731-736	All Other Diseases of Musculo-Skeletal System	134	93	227	-
750-759	Congenital Malformations	65	66	131	-
760-762	Birth Injuries	6	2	8	-
765	Ophthalmia Neonatorum	5	7	12	-
770	Haemolytic Disease(Neo Natal)	2	4	6	1
773-776	Other Diseases-Early Infancy	126	162	288	11
791	Senility	27	28	55	1
788-9	P.U.O.	385	245	630	3
788-1-) 788-7) 788-9) 789-792) 795)	All other Ill-Defined Causes of Morbidity	439	1,116	1,578	60

"E" CODE ALTERNATIVE CLASSIFICATION OF ACCIDENTS, POISONING AND VIOLENCE (EXTERNAL CAUSE).

Detailed List No.		Out-patients	In-patients	Total Cases	Deaths
E810-E835	Motor Vehicle Accidents	249	362	611	18
E800-E802	Other Transport Accidents	93	339	432	2
E870-E895	Accidental Poisoning	80	155	235	10
E900-E904	Accidental Falls	606	484	1,090	-
E612	Accidents Caused by Machinery	105	35	140	1
E916	Accidents Caused by Fire	108	148	256	9
E917,E918	Accidents cuased by Hot Substances & Corrosives	-	129	129	4
E919	Accidents Caused by Firearms	5	11	16	2
E910-E913) E915,E920) E928,E930) E965)	All Other Accidental Causes	2,218	1,263	3,481	11
E970-E979	Suicide and Self-Inflicted Injury	15	8	23	2
E980-E985	Assault, Homicide	799	942	1,741	19

"N" CODE ALTERNATIVE CLASSIFICATION OF ACCIDENTS, POISONING AND VIOLENCE (NATURE OF INJURY)

N800-N804	Fracture of Skull	60	125	185	11
N805-N809	Fracture of Spine & Trunk	18	86	104	2
N810-N829	Fracture of Limbs	500	649	1,149	3
N830-N839	Dislocation	-	-	-	-
N840-N848	Sprains and Strains	805	180	985	2
N850-N856	Head Injury (excluding Fracture)	163	178	341	18
N860-N869	Internal Injury, Chest, Abdomen and Pelvis	25	76	101	6
N870-N908	Laceration & Open Wounds	1,899	1,080	2,979	8
N910-N929	Superficial Injury - Contusion	793	527	1,320	1
N930-N936	Foreign Body entering through Orifice	144	52	196	2
N940-N949	Burns	368	274	642	12
N960-N(79	Effects of Poison	82	160	242	7
N950-N959) N980-N999)	All Other Effects of External Causes	15	113	128	-

Detailed List No.		Out-patients	In-patients	Total Cases	Deaths
Y00	Medical Examinations, Board and Tax Exemption Examinations	3,980	-	3,980	-
Y02	Prophylactic Injections:				
	a) Smallpox Vaccination	1,524	-	1,524	-
	b) T.A.B.	344	-	344	-
	c) Diphtheria, Whooping Cough and Tetanus	338	-	338	-
	d) Tetanus	81	-	81	-
	e) Poliomyelitis	3,045	-	3,045	-
	f) Yellow Fever	370	-	370	-
	g) Cholera	38	-	38	-
Y06	Ante-Natal Examinations	5,100	-	5,100	-
Y08	Attendants admitted as In-Patients with sick Children	-	2,560	2,560	-

SUBSEQUENT ATTENDANCES:

Subsequent Ante-Natal Attendances	2,810
Subsequent Prophylactic Injections	714